

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 27 JAN 2005

PCT
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To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/E2004/000046

International filing date (day/month/year)
26.03.2004

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC
G01N27/22, G01R27/26

Applicant
RECONCILE RESEARCH LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 b/s(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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Telephone No. +49 89 2399-2233



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IE2004/000046

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IE2004/000046

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IE2004/000046

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and Industrial
applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 5-39

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 5-39
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/E2004/000046

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-4

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-4
	No: Claims	
Inventive step (IS)	Yes: Claims	1-4
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-4
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/E2004/000046

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

1. Reference is made to the following documents:

- D1: Ep 1 164 380 A2 (cited in the application)
- D2: GB 2 097 084 A
- D3: EP 1 336 838 A2
- D4: US 5 714 998

Re Item IV.

2.1. The separate inventions/groups of inventions are:

- (i) **claims 1-4:** A capacitor sensing inspection system, *inter alia* comprising the features of the characterizing portion of claim 1.
- (ii) **claims 5-11:** An inspection system, *inter alia* comprising a stop movable between an inactive position and an active position, wherein in the active position the stop prevents the progress of items along a conveyor belt, a control system responsive to a user input to place said inspection system in a teach mode, wherein upon receipt of the user input, the control system activates the stop and upon the exiting of the inspection system from the teach mode causes the stop to move to the inactive position.
- (iii) **claims 12-17:** An inspection system wherein, *inter alia*, a first capacitor is positioned remotely from a conveyor belt.
- (iv) **claims 18-21:** An inspection system, *inter alia* comprising a second sensor being a light sensitive sensor and having an associated light source, wherein the light sensitive sensor is positioned on one side of a transport mechanism and the light source is positioned on an opposing side of the transport mechanism along an axis which is inclined relative to the longitudinal axis of the transport mechanism, such that the second sensor is disposed to provide an indication of the presence of an inlay card in an optical disk package.
- (v) **claims 22-23:** An inspection system, *inter alia* comprising a first "pattern\colour" recognition sensor for indicating a reference "pattern\colour" in a package, and a capacitor sensing system, wherein the first "pattern\colour" recognition sensor is used to indicate the correct presence of printed matter on one side of the package and the capacitor sensing system is used to indicate the correct contents in a package.
- (vi) **claims 24-30:** An inspection system, *inter alia* comprising a second sensor configured to provide a continuous output representing a pass or fail status

for the contents of a test location, output means adapted to provide an output indicative of the output of the second sensor, wherein the output means is adapted to provide an immediate pass output if a pass status is provided by the second sensor and in the event of a fail status is further adapted to continue to test for a pass status from the second sensor for a first delay time.

- (vii) **claims 31-39**: A discard mechanism comprising an opening for receiving a package, the opening being positioned between first and second belts of a conveyor belt system, an arm movable between a rest position external to the conveyor belt system and an active position, such that when the discard mechanism is activated, the arm is moved from the rest position to the active position displacing a package from one of the belts, thus allowing the package to fall through and be discarded through the opening.

2.2. They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

The requirements of Rule 13.1 PCT imply that if the invention is to be defined by a plurality of independent claims, then these claims should be linked together by a common concept which must be new and inventive.

The application is related in a first aspect (independent **claim 1**) to automatic balancing (of an inspection system using a pair of capacitors).

The application is related in a second aspect (independent **claim 5**) to enabling more precise "teaching" of an inspection system (see the description of the present application on p.21 l.20-26).

The application is related in a third aspect (independent **claim 12**) to minimizing/space saving of an inspection system (see p.23 l.14,23).

The application is related in a fourth aspect (independent **claim 18**) to a simplified and inexpensive system for detecting the presence of inlay cards in optical disk packages (see e.g. p.12 l.7-8).

The application is related in a fifth aspect (independent **claim 22**) to a simplified system for indicating the correct contents in a package (p.15 l.26-28).

The application is related in a sixth aspect (independent **claim 24**) to (significantly) reducing the number of packages that fail because of warped outer cases (see p.20 l.6-7).

The application is related in a seventh aspect (independent **claim 31**) to a fast and small discard mechanism (see p.24 l.19-20).

The objective problems underlying these seven aspects are completely different and/or trivial and well-known to the skilled person and, hence, cannot provide a common inventive concept.

Independent **claims 1 and 31** have no common concept at all.

Independent **claims 1, 5, 12, 18, 22 and 24** have in common that they relate to an inspection system. However, this common concept is not novel, see e.g. **D1** (§26), **D3** (title) or **D2** (p.4 l.20-44).

Furthermore, independent **claims 1, 12 and 22** have in common a capacitive sensing system comprising a pair of capacitors (reference capacitor, measurement capacitor). However, this common concept is not novel, see e.g. **D1** (§26), **D3** (see the Fig) or **D2** (p.4 l.20-44); see also the description of the present application on p.3 l.1-18.

Furthermore, independent **claims 5, 12, 18 and 31** have in common a transport mechanism for moving at least one package. However, this common concept is not novel, see e.g. **D4** (col.2 l.63-65) or **D1** (col.6 l.4).

Furthermore, independent **claims 12, 18 and 31** have in common that said transport mechanism is a conveyor belt / moves said at least one package along a longitudinal axis. However, this concept is not novel, see e.g. **D4** (col.2 l.63-65).

Finally, independent **claims 18 and 24** have in common a first sensor for identifying the arrival of a packaged good at a test location and a second sensor disposed about said test location. However, this concept is not novel, see e.g. **D4** (col.2 l.63-65).

- 2.3. For said reasons it is considered that the claims on file can be divided into the seven different groups of inventions as indicated above.

Re Item V.

- 3.1. Document **D1**, which is considered to represent the most relevant state of the art, discloses all the features of independent **claim 1** (see p.3 l.1-18 of the present application), except for the features of the characterizing portion of said claim 1, i.e. that the capacitor system further comprises an "auto-balancer" for controlling the balance point, wherein upon activation of the auto-balancer, the potentiometer is adapted to be moved into a first position where a first indication is received from the measurement circuit and into a second position where a second indication is

received from the measurement circuit, the auto-balancer being then adapted to move the potentiometer position into a position "substantially midway" between said first and second positions so as to automatically provide a balance point for the measurement circuit.

The subject-matter of **claim 1** is therefore novel (Article 33(2) PCT).

- 3.2. The problem to be solved by the present invention may be regarded as to provide a said inspection system with automatic balancing capabilities.
- 3.3. The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) since none of the available prior art documents discloses or hints at automated balancing. In **D1**, the potentiometer 14 appears to be used manually. The other available documents are completely quiet about balancing.
- 3.4. **Claims 2-4** are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Re Item VII.

4. For the sake of completeness, the following formal deficiencies are also mentioned:
- (i) The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
 - (ii) Figures 1-3, 5 and 11 are not in conformity with Rule 11.11(a) PCT.
 - (iii) The brief description of the figures 7 and 8 on p.9 l.25-28 is not consistent at all with what said figures actually show.
 - (iv) Figures 10-15 are not briefly described as required by Rule 5.1(a)(iv) PCT.
 - (v) The phrase on p.23 l.4 is indefinite and should be deleted.
 - (vi) An output of "motor 50" is missing in Fig.14, in contradiction to p.28 l.1-3.
 - (vii) The passage on p.30 l.26-29 is considered to be superfluous and should, hence, be deleted.

Re Item VIII.

5. The application does not meet the requirements of Article 6 PCT, because the claims are not clear.
- 5.1. The features in the apparatus claim 1 "the first/second capacitor in use having a reference package/package to be measured as a dielectric" relate to a method of using the apparatus rather than clearly defining the apparatus in terms of its technical features. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.
- 5.2. In addition, the features "reference package" and "package to be measured" are vague.
- 5.3. In claim 1, it is not at all clear what is meant by the phrase "...so as to equalise a response between the first and second indications" since in the preceding, it is defined that said "first indication" is to be provided "when the capacitance of the first capacitor is substantially greater than the capacitance of the second capacitor" and that a "second indication" is to be provided "when the capacitance of the first capacitor is substantially less than the capacitance of the second capacitor".
- 5.4. The feature of claim 1 "the potentiometer is adapted to be moved into a first position where a first indication is received ...and into a second position where a second indication is received ..." does not appear to reflect what was actually meant (see p.19 I.1,5: "... until ...").
In this context, the last feature of claim 1 (see p.31 I.21-23) is also not clear, since "midway between said first and second positions" does not appear to be a balance point for the measurement circuit, as long as said first and second positions are not limited to the conditions as described on p.19 I.1-7.
- 5.5. In claim 1, it is furthermore not clear what should be understood by the expression "substantially midway".
- 5.6. The vague and imprecise statement in the description on p.9 I.5-8 implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them. The said passage should, hence, be deleted.

PATENT COOPERATION TREATY

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Date of mailing
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Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/E2004/000046

International filing date (day/month/year)
26.03.2004

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC
G01N27/22, G01R27/26

Applicant
RECONCILE RESEARCH LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b/s(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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Meyer, F

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/E2004/000046

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IE2004/000046

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IE2004/000046

Box No. III Non-establishment of opinion with regard to novelty, inventive step and Industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 5-39

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 5-39
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IE2004/000046

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-4

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-4
	No: Claims	
Inventive step (IS)	Yes: Claims	1-4
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-4
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/E2004/000046

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

1. Reference is made to the following documents:

- D1: Ep 1 164 380 A2 (cited in the application)
- D2: GB 2 097 084 A
- D3: EP 1 336 838 A2
- D4: US 5 714 998

Re Item IV.

2.1. The separate inventions/groups of inventions are:

- (i) **claims 1-4:** A capacitor sensing inspection system, *inter alia* comprising the features of the characterizing portion of claim 1.
- (ii) **claims 5-11:** An inspection system, *inter alia* comprising a stop movable between an inactive position and an active position, wherein in the active position the stop prevents the progress of items along a conveyor belt, a control system responsive to a user input to place said inspection system in a teach mode, wherein upon receipt of the user input, the control system activates the stop and upon the exiting of the inspection system from the teach mode causes the stop to move to the inactive position.
- (iii) **claims 12-17:** An inspection system wherein, *inter alia*, a first capacitor is positioned remotely from a conveyor belt.
- (iv) **claims 18-21:** An inspection system, *inter alia* comprising a second sensor being a light sensitive sensor and having an associated light source, wherein the light sensitive sensor is positioned on one side of a transport mechanism and the light source is positioned on an opposing side of the transport mechanism along an axis which is inclined relative to the longitudinal axis of the transport mechanism, such that the second sensor is disposed to provide an indication of the presence of an inlay card in an optical disk package.
- (v) **claims 22-23:** An inspection system, *inter alia* comprising a first "pattern\colour" recognition sensor for indicating a reference "pattern\colour" in a package, and a capacitor sensing system, wherein the first "pattern\colour" recognition sensor is used to indicate the correct presence of printed matter on one side of the package and the capacitor sensing system is used to indicate the correct contents in a package.
- (vi) **claims 24-30:** An inspection system, *inter alia* comprising a second sensor configured to provide a continuous output representing a pass or fail status

for the contents of a test location, output means adapted to provide an output indicative of the output of the second sensor, wherein the output means is adapted to provide an immediate pass output if a pass status is provided by the second sensor and in the event of a fail status is further adapted to continue to test for a pass status from the second sensor for a first delay time.

- (vii) **claims 31-39**: A discard mechanism comprising an opening for receiving a package, the opening being positioned between first and second belts of a conveyor belt system, an arm movable between a rest position external to the conveyor belt system and an active position, such that when the discard mechanism is activated, the arm is moved from the rest position to the active position displacing a package from one of the belts, thus allowing the package to fall through and be discarded through the opening.

2.2. They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

The requirements of Rule 13.1 PCT imply that if the invention is to be defined by a plurality of independent claims, then these claims should be linked together by a common concept which must be new and inventive.

The application is related in a first aspect (independent **claim 1**) to automatic balancing (of an inspection system using a pair of capacitors).

The application is related in a second aspect (independent **claim 5**) to enabling more precise "teaching" of an inspection system (see the description of the present application on p.21 I.20-26).

The application is related in a third aspect (independent **claim 12**) to minimizing/space saving of an inspection system (see p.23 I.14,23).

The application is related in a fourth aspect (independent **claim 18**) to a simplified and inexpensive system for detecting the presence of inlay cards in optical disk packages (see e.g. p.12 I.7-8).

The application is related in a fifth aspect (independent **claim 22**) to a simplified system for indicating the correct contents in a package (p.15 I.26-28).

The application is related in a sixth aspect (independent **claim 24**) to (significantly) reducing the number of packages that fail because of warped outer cases (see p.20 I.6-7).

The application is related in a seventh aspect (independent **claim 31**) to a fast and small discard mechanism (see p.24 I.19-20).

The objective problems underlying these seven aspects are completely different and/or trivial and well-known to the skilled person and, hence, cannot provide a common inventive concept.

Independent **claims 1 and 31** have no common concept at all.

Independent **claims 1, 5, 12, 18, 22 and 24** have in common that they relate to an inspection system. However, this common concept is not novel, see e.g. **D1** (§26), **D3** (title) or **D2** (p.4 l.20-44).

Furthermore, independent **claims 1, 12 and 22** have in common a capacitive sensing system comprising a pair of capacitors (reference capacitor, measurement capacitor). However, this common concept is not novel, see e.g. **D1** (§26), **D3** (see the Fig) or **D2** (p.4 l.20-44); see also the description of the present application on p.3 l.1-18.

Furthermore, independent **claims 5, 12, 18 and 31** have in common a transport mechanism for moving at least one package. However, this common concept is not novel, see e.g. **D4** (col.2 l.63-65) or **D1** (col.6 l.4).

Furthermore, independent **claims 12, 18 and 31** have in common that said transport mechanism is a conveyor belt / moves said at least one package along a longitudinal axis. However, this concept is not novel, see e.g. **D4** (col.2 l.63-65).

Finally, independent **claims 18 and 24** have in common a first sensor for identifying the arrival of a packaged good at a test location and a second sensor disposed about said test location. However, this concept is not novel, see e.g. **D4** (col.2 l.63-65).

- 2.3. For said reasons it is considered that the claims on file can be divided into the seven different groups of inventions as indicated above.

Re Item V.

- 3.1. Document **D1**, which is considered to represent the most relevant state of the art, discloses all the features of independent **claim 1** (see p.3 l.1-18 of the present application), except for the features of the characterizing portion of said claim 1, *i.e.* that the capacitor system further comprises an "auto-balancer" for controlling the balance point, wherein upon activation of the auto-balancer, the potentiometer is adapted to be moved into a first position where a first indication is received from the measurement circuit and into a second position where a second indication is

received from the measurement circuit, the auto-balancer being then adapted to move the potentiometer position into a position "substantially midway" between said first and second positions so as to automatically provide a balance point for the measurement circuit.

The subject-matter of **claim 1** is therefore novel (Article 33(2) PCT).

- 3.2. The problem to be solved by the present invention may be regarded as to provide a said inspection system with automatic balancing capabilities.
- 3.3. The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) since none of the available prior art documents discloses or hints at automated balancing. In **D1**, the potentiometer 14 appears to be used manually. The other available documents are completely quiet about balancing.
- 3.4. **Claims 2-4** are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Re Item VII.

4. For the sake of completeness, the following formal deficiencies are also mentioned:
- (i) The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
 - (ii) Figures 1-3, 5 and 11 are not in conformity with Rule 11.11(a) PCT.
 - (iii) The brief description of the figures 7 and 8 on p.9 l.25-28 is not consistent at all with what said figures actually show.
 - (iv) Figures 10-15 are not briefly described as required by Rule 5.1(a)(iv) PCT.
 - (v) The phrase on p.23 l.4 is indefinite and should be deleted.
 - (vi) An output of "motor 50" is missing in Fig.14, in contradiction to p.28 l.1-3.
 - (vii) The passage on p.30 l.26-29 is considered to be superfluous and should, hence, be deleted.

Re Item VIII.

5. The application does not meet the requirements of Article 6 PCT, because the claims are not clear.
- 5.1. The features in the apparatus claim 1 "the first/second capacitor in use having a reference package/package to be measured as a dielectric" relate to a method of using the apparatus rather than clearly defining the apparatus in terms of its technical features. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.
- 5.2. In addition, the features "reference package" and "package to be measured" are vague.
- 5.3. In claim 1, it is not at all clear what is meant by the phrase "... so as to equalise a response between the first and second indications" since in the preceding, it is defined that said "first indication" is to be provided "when the capacitance of the first capacitor is substantially greater than the capacitance of the second capacitor" and that a "second indication" is to be provided "when the capacitance of the first capacitor is substantially less than the capacitance of the second capacitor".
- 5.4. The feature of claim 1 "the potentiometer is adapted to be moved into a first position where a first indication is received ...and into a second position where a second indication is received ..." does not appear to reflect what was actually meant (see p.19 I.1,5: "... until ...").
In this context, the last feature of claim 1 (see p.31 I.21-23) is also not clear, since "midway between said first and second positions" does not appear to be a balance point for the measurement circuit, as long as said first and second positions are not limited to the conditions as described on p.19 I.1-7.
- 5.5. In claim 1, it is furthermore not clear what should be understood by the expression "substantially midway".
- 5.6. The vague and imprecise statement in the description on p.9 I.5-8 implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity (Article 6 PCT) when used to interpret them. The said passage should, hence, be deleted.